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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,479	06/07/2001	Eiji Yamada	70820-55991	8919

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EXAMINER	
AGUSTIN, PETER VINCENT	
ART UNIT	**PAPER NUMBER**
2652	9

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/876,479	YAMADA, EIJI	
	Examiner	Art Unit	
	Peter Vincent Agustin	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 10-14* is/are rejected.

7)☒ Claim(s) *1,2 and 4-12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 1, 2 & 4-12 are objected to because of the following informalities:

Claim 1: "first region photodetector" and "second region photodetector" should be --first photodetector region-- and --second photodetector region--, respectively.

Claim 6, line 1: "wherein" should be --further comprising--.

Claim 6, line 6: "fourth region, and" should be --fourth region, and wherein--.

Claim 12, line 4: "the focal shift" should be --a focal shift--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2 & 10-14 rejected under 35 U.S.C. 102(e) as being anticipated by Saimi et al. (hereafter Saimi) (US 6,430,137).

In regard to claim 1, Saimi discloses an optical pickup device (figure 19) comprising: a light source (201); a light concentrating optical system (302, 220 & 205) for concentrating a light

beam emitted from the light source on a recording surface (208) of an optical disk (209); an optical element means (309) for splitting the light beam that has been reflected on the recording surface and has passed through the light-concentrating optical system; a light-receiving means (307) for receiving a split light beam as a first light beam from the optical element means and measuring quantities of light of the split light beam; and an aberration signal generating means (308) for generating an aberration signal that represents an aberration of the light-concentrating optical system based on a quantity of light of a portion near an optical axis of the first light beam and a quantity of light of a portion separated from the optical axis of the first light beam, wherein the optical element means generates the first light beam by splitting the light beam, which has passed through the light-concentrating optical system, along a first straight line that is perpendicular to the optical axis of the light beam and serves as a boundary such that the first light beam is directed to the light receiving means (see figure 4), the light receiving means comprises a first photodetector region (figure 4, element 17a) and a second photodetector region (17b) arranged in positions located apart from the optical axis of the first light beam, the first region photodetector and the second region photodetector are provided substantially linearly symmetrical with respect to a straight line axis of symmetry being located on the light receiving means and extending through the optical axis of the first light beam, and the aberration signal generating means generates the aberration signal by using a difference between electric signals from the first region photodetector and the second region photodetector (column 10, lines 59-62).

In regard to claim 2, Saimi discloses a focal shift signal generating means (column 13, lines 53-64) for generating a focal shift signal by using the aberration signal based on the quantity of light measured by the light-receiving means.

In regard to claim 10, Saimi discloses that the light-concentrating optical system comprises an object lens (figure 19, element 205) of a combination of a plurality of lenses (203 & 204).

In regard to claim 11, Saimi discloses a spherical aberration correcting means (figure 19, element 210) for correcting a spherical aberration of the light-concentrating optical system based on the aberration signal from the aberration signal generating means.

In regard to claim 12, Saimi discloses an aberration correcting method for correcting a spherical aberration by means of the optical pickup device (figure 19), comprising the steps of: correcting the focal shift of the light-concentrating optical system (column 13, lines 53-64); and thereafter correcting the spherical aberration (figure 19, element 210).

In regard to claim 13, Saimi discloses an aberration correcting method for correcting a spherical aberration by means of the optical pickup device (figure 19), comprising the steps of: periodically driving the spherical aberration correcting means (210); and correcting the spherical aberration of the light-concentrating optical system based on the spherical aberration detected by an aberration detecting means (308) during the driving.

In regard to claim 14, Saimi discloses an aberration detecting unit (figure 19) comprising: a light-concentrating optical system (302, 220 & 205) for concentrating a light beam on a reflecting body (209); an optical element means (309) for splitting the light beam that has been reflected on the reflecting body and has passed through the light-concentrating optical system; a light-receiving means (307) for receiving at least one split light beam having an optical axis from the optical element means and for separately measuring quantities of light in predetermined portions of each split light beam that are respectively located near to and separated from its

optical axis; and an aberration signal generating means (308) for generating an aberration signal that represents an aberration of the light-concentrating optical system based on said measured quantities of light from said predetermined portions of said at least one split light beam near said optical axis of each of said at least one split light beam and measured quantities of light from said predetermined portions of said at least one split light beam separated from said optical axis of said split light beam.

Allowable Subject Matter

5. Claims 4-9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claim 4, no prior art of record alone or in combination discloses or suggests an optical pickup device comprising a light source, a light-concentrating optical system, an optical element means for splitting the light beam, a light-receiving means for receiving a split light beam as a first light beam, and an aberration signal generating means, wherein the optical element means generates the first light beam by splitting the light beam, which has passed through the light-concentrating optical system, along a first straight line that is perpendicular to the optical axis of the light beam and serves as a boundary such that the first light beam is directed to the light receiving means, the light receiving means comprises a first region photodetector and a second region photodetector arranged in positions located apart from the optical axis of the first light beam, the first region photodetector and the second region photodetector are provided substantially linearly symmetrical with respect to a straight line axis

of symmetry being located on the light receiving means and extending through the optical axis of the first light beam, and the aberration signal generating means generates the aberration signal by using a difference between electric signals from the first region photodetector and the second region photodetector, and wherein **the optical element means further generates a second light beam by splitting the light beam that has passed through the light-concentrating optical system along a second straight line perpendicular to the optical axis of the light beam and serves as a boundary such that the second light beam is directed to the light-receiving means, the light-receiving means comprises a third photodetector region and a fourth photodetector region, the third photodetector region and the fourth photodetector region are provided approximately linearly symmetrical with respect to an axis of symmetry of a straight line that extends through the optical axis of the second light beam and is located on the light-receiving means corresponding to the second straight line, the third photodetector region and the fourth photodetector region are located at respective distances from the optical axis of the second light beam, said respective distances being shorter than the respective distances of the first photodetector region and the second photodetector region from the optical axis of the first light beam**, and a focal shift signal generating means is provided for generating a focal shift signal **by using a difference between electric signals from the third photodetector region and the fourth photodetector region**.

Claims 5-9 are allowable because they are dependent upon base claim 4.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PVA
05/17/2004

W. R. YOUNG
PRIMARY EXAMINER